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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,484	12/09/2005	Oswald Gromer	02894-0695US1	8657
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FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER THANH, QUANG D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/531,484	Applicant(s) GROMER ET AL.	
	Examiner Quang D. Thanh	Art Unit 3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-35,37-41 and 47-82 is/are pending in the application.
4a) Of the above claim(s) 47-67,75 and 76 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 74 is/are allowed.
- 6) ☒ Claim(s) 30-35,37-41,68-73 and 77-82 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. This office action is responsive to the amendment filed on 12/16/09. As directed by the amendment: claims 30, 37-41, 68, 69, 72, and 74 have been amended; Claims 1-29, 36 and 42-46 have been cancelled; Claims 47-67, 75, and 76 have been withdrawn; and new claims 77-82 have been added. Thus, claims 30-35, 37-41, 68-74, and 77-82 are presently pending in this application.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 30-31, 38, 68-72, 77, 79-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soule et al. (6193172) in view of Moreland et al. (4,671,463).

4. Regarding claims 30, 77 and 79, Soule discloses a spray nozzle (figs. 13-15) which can be used for a mouth rinse comprising a nozzle member (118), a nozzle attachment (112) coupled to the nozzle member to define an axially extending chamber, a liquid duct (172) to supply pressurized liquid to the chamber, a pressure piece (116) disposed within the chamber, and a nozzle outlet (146) extending out of the chamber and configured to discharge a cleaning jet, except for one spring element that urges the pressure piece towards the nozzle outlet. However, Moreland et al. teaches a coil spring element serving as a biasing means to maintain the nozzle in place (fig. 2, col. 4, lines 14-16), wherein the spring element comprising a helical spring having two spring arms at each end (fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the device in the Soule's

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reference, to include a spring element, as suggested and taught by Moreland, for the purpose of securing and maintain the element of the nozzle in place (col. 4, lines 14-16).

5. Regarding claim 31, Soule discloses the first (159) and second end (156) of the pressure piece comprising a cup-shaped portion.

6. Regarding claim 38, Soule discloses the nozzle outlet (146) sized and configured such that the liquid jet is diverging hollow cone jet (col. 8, lines 44-52).

7. Regarding claims 68,80 and 81, Soule discloses a spray nozzle (figs. 13-15) which can be used for a mouth rinse comprising a nozzle member (118), a nozzle attachment (112) coupled to the nozzle member to define an axially extending chamber, a liquid duct (172) to supply pressurized liquid to the chamber, a pressure piece (116) disposed within the chamber, a whirl chamber (153) connected to the chamber to create a circulating flow of the liquid; and a nozzle outlet (120, 146) formed in the nozzle attachment and extending centrally from the whirl chamber and configured to discharge a cleaning jet; the nozzle outlet comprising substantially cylindrical narrow passages, except for one spring element that urges the pressure piece towards the nozzle outlet. However, Moreland et al. teaches a coil spring element serving as a biasing means to maintain the nozzle in place (fig. 2, col. 4, lines 14-16), wherein the spring element comprising a helical spring having two spring arms at each end. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the device in the Soule's reference, to include a spring element, as suggested

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and taught by Moreland, for the purpose of securing and maintain the element of the nozzle in place (col. 4, lines 14-16),.

8. Regarding claim 69, Soule discloses the nozzle outlet (120) comprising a conical expansion adjacent (122) the passages.

9. Regarding claim 70, Soule discloses openings(161) extending into the whirl chamber (153) along a substantially transverse direction and with a center offset relative to the longitudinal axis of the whirl chamber, the liquid jet exiting from the openings impacts an opposite wall of the whirl chamber at an angle not exceeding about 45° (see also fig. 14).

10. Regarding claim 71, Soule discloses a first end (159) of the pressure piece comprising a cup-shaped portion having grooves (161) extending from the chamber to openings.

11. Regarding claim 72, Soule discloses the second end of the pressure piece (116), opposite the first end, comprising a second cup shaped portion (156) including an interior space (between recessed surface (158) and bore (128)) in fluid communication with the liquid duct (172) as well as with the chamber.

12. Claims 32-35, 73 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soule/Moreland and further in view of Farago et al. (5067655).

13. Regarding claims 32,35 and 78, Soule in view of Moreland discloses the spring having two spring arms at each end, and the nozzle plate (114) comprising the nozzle outlet (146), but does not disclose the second end (156) of the pressure piece comprising slits extending axially to provide fluid communication between the liquid duct

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and the chamber. Farago teaches a pressure piece in fig. 14, with axial slits (42) providing fluid communication to the outlet chamber. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the second end of the pressure piece of Soule with axial slits as taught by Farago for achieving a large whirl channel eccentricity.

14. Regarding claim 33, Soule discloses a nozzle plate (114) to engage the first end (159) of the pressure piece to define a whirl chamber (160).

15. Regarding claim 34, Soule discloses the first end (159) of the pressure piece comprising grooves (161) (see fig. 14) extending axially and the nozzle member (118) comprising a circumferential ring (132) adjacent to the grooves of the pressure piece to define ducts for fluid communication between the chamber and the whirl chamber (160).

16. Regarding claim 73, Soule does not disclose the second end (156) of the pressure piece comprising axial slits. Farago teaches a pressure piece in fig. 14, with axial slits (42) providing fluid communication to the outlet chamber. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the second end of the pressure piece of Soule with axial slits as taught by Farago for achieving a large whirl channel eccentricity.

17. Claims 37 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soule et al. in view of Moreland.

18. Regarding claims 37 and 39, Soule/Moreland does not specially mention the fluid pressure of the cleaning jet to be at least about 15 bar or the velocity of the cleaning jet

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to be at least about 23 m/s. However, the spray nozzle of Soule is capable of handling the fluid pressure of such pressure and velocity and the feature of choosing a particular fluid pressure to be at least 15 bar or the velocity of the cleaning jet to be 23m/s is merely a design consideration and it would have been obvious to one of ordinary skill in the art at the time the invention was made to meet the pressure or velocity as desired by the user, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

19. Regarding claims 41-40, Soule does not specifically mention that the liquid duct supplies pressurized liquid to the chamber at a pressure between 25 bar and 55 bar, or between 35 bar and 45 bar. However, the spray nozzle of Soule is capable of handling the pressure of such pressure of liquid and the feature of choosing a particular fluid pressure or the range of pressure is merely a design consideration and it would have been obvious to one of ordinary skill in the art at the time the invention was made to meet the pressure range as desired by the user, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

20. Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soule et al. (6193172). Soule discloses a spray nozzle (figs. 13-15) comprising a nozzle member (118), a nozzle attachment (112) coupled to the nozzle member to define an axially extending chamber, a liquid duct (172) to supply pressurized liquid to the chamber, a pressure piece (116) disposed within the chamber, and a nozzle outlet (146) extending

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out of the chamber and configured to discharge a cleaning jet. Soule does not explicitly disclose supplying the pressurized liquid to the chamber at a pressure of at least 15 bar. However, the spray nozzle of Soule is capable of handling the fluid pressure of such pressure and the feature of choosing a particular fluid pressure to be at least 15 bar is merely a design consideration and it would have been obvious to one of ordinary skill in the art at the time the invention was made to meet the pressure or velocity as desired by the user, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

21. Applicant's arguments with respect to claims 30-35, 37-41, 68-73, and 77-82 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

22. Claim 74 is allowed.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D. Thanh whose telephone number is (571) 272-4982. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang D. Thanh/
Primary Examiner, Art Unit 3771

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